

MWA Homework 02 - NodeJS 01

Written Exercises

1. Explain why do we want sometimes to use ``setImmediate`` instead of using ``setTimeout``?
2. Explain the difference between ``process.nextTick`` and ``setImmediate``?
3. Name 10 core modules that Node provides by default, and 10 of the Global objects?

Question 1:

We use the **`setImmediate()`** method to immediately enqueue an operation/task to the check queue, to be dispatched by the event loop when it finishes its current poll operations, as opposed to waiting for a specified time (ms) before an operation/task is being enqueued to the timers queue when the **`setTimeout()`** method is used.

In summary, the **`setImmediate()`** will always be executed before any **`setTimeout()`** if scheduled within an I/O cycle, independently of how many timers are present.

Question 2:

The difference between the **`process.nextTick()`** and the **`setImmediate()`**, is that, the `nextTickQueue` enqueued by **`process.nextTick()`** will be processed after the current operation is completed, despite the current phase of the event loop. While the **`setImmediate()`** executes an operation enqueued to the check queue only after the current poll operation from the poll phase is completed.

Question 3:

Core Modules:

- `http`
- `url`
- `path`
- `fs`
- `util`
- `os`
- `stream`
- `buffer`
- `child_process`
- `process`

Global Objects:

- `__dirname`
- `__filename`
- `exports`

- module
- require
- setImmediate
- setTimeout
- clearTimeout
- setInterval
- clearInterval